

Claims

[c1] What is claimed is:

1.A floating-type clamping mechanism for use in an optical disk drive comprising:

a clamping body;

a clamping yoke comprising a first central hole;

a central clamping element for combining with the clamping yoke by passing through the first central hole;

a magnetic element comprising a second central hole for holding the central clamping element and combining with the clamping yoke; and

a plurality of elastic elements fixed to the clamping body and the clamping yoke.

[c2] 2. The floating-type clamping mechanism of claim 1 wherein the magnetic element is a magnet.

[c3] 3.The floating-type clamping mechanism of claim 1 wherein the clamping yoke further comprises a plurality of connecting holes and the clamping body comprises a plurality of connecting holes positioned correspondingly to the plurality of connecting holes of the clamping yoke and the plurality of elastic elements are connected to the plurality of connecting holes of the clamping yoke and

the plurality of connecting holes of the clamping body.

[c4] 4.The floating-type clamping mechanism of claim 1 wherein when an optical disk is loaded into the optical disk drive, the magnetic element of the floating-type clamping mechanism attracts a magnetic element on a turntable of the optical disk drive for fixing the optical disk, and when the optical disk is ejected from the optical disk drive, the magnetic element of the floating-type clamping mechanism separates from the magnetic element on the turntable of the optical disk drive and the magnetic element of the floating-type clamping mechanism separates from the clamping body by the elastic force of the plurality of elastic elements.

[c5] 5.A floating-type clamping mechanism for use in an optical disk drive, the optical disk drive comprising a turntable, the floating-type clamping mechanism comprising:

a clamping body comprising a plurality of connecting holes;

a clamping yoke comprising a first central hole, and a plurality of connecting holes positioned corresponding to the plurality of connecting holes of the clamping body;

a central clamping element for combining with the clamping yoke by passing through the first central hole;

a magnetic element comprising a second central hole for holding the central clamping element and combining with the clamping yoke; and
a plurality of elastic elements wherein the two ends of each elastic element are fixed to the connecting hole of the clamping yoke and the connecting hole of the clamping body;
wherein when an optical disk is loaded into the optical disk drive, the magnetic element of the floating-type clamping mechanism attracts a magnetic element on the turntable of the optical disk drive for fixing the optical disk, and when the optical disk is ejected from the optical disk drive, the magnetic element of the floating-type clamping mechanism separates from the magnetic element on the turntable of the optical disk drive and the magnetic element of the floating-type clamping mechanism separates from the clamping body by the elastic force of the plurality of elastic elements.

[c6] 6.The floating-type clamping mechanism of claim 5 wherein the magnetic element is a magnet.

[c7] 7.A floating-type clamping mechanism for use in an optical disk drive comprising:
a magnetic element;
a clamping yoke for being attracted by the magnetic element; and

a clamping body comprising a central clamping element and a plurality of cantilevers connected to the central clamping element for holding the magnetic element and the clamping yoke.

- [c8] 8. The floating-type clamping mechanism of claim 7 wherein when an optical disk is loaded into the optical disk drive, the magnetic element of the floating-type clamping mechanism attracts a magnetic element on a turntable of the optical disk drive for fixing the optical disk, and when the optical disk is ejected from the optical disk drive, the magnetic element of the floating-type clamping mechanism separates from the magnetic element on the turntable of the optical disk drive and the magnetic element of the floating-type clamping mechanism separates from the clamping body by the restoring force of the plurality of cantilevers.